	Application No.	Applicant(s)
Notice of Allowability	10/606,699	MEIRI ET AL.
	Examiner	Art Unit	
	Yaima Campos	2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _10/11/07_.

2. ☒ The allowed claim(s) is/are _1,3,6-10,12 and 15-18_.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided by

37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no

later than the payment of the issue fee.

2.   Authorization for this examiner's amendment was given in a telephone interview

with Donald W. Muirhead (Reg. No. 33,978) on December 19, 2007.

3.   The application has been amended as follows:

4.   **Claim 1** A method of using a local storage device to read desired data while

the data is being transferred from the local storage device to a remote storage device, the

method comprising:

if the desired data is entirely in a cache of the local storage device, the local storage

device returning the data from the cache, wherein the cache of the local storage device

contains data written to the local storage device begun after a first time and before a

second time that is associated with a first chunk of data and contains data written to the

local storage device begun after the second time that is associated with a second chunk of

data different from the first chunk of data and wherein after completion of all writes

associated with the first chunk of data, the local storage device initiates transfer of writes

associated with the first chunk of data to the remote storage device, an order of the

transfer from the local storage device to the remote storage device of data from the first

chunk being independent of an order in which data writes of the first chunk are provided

to the local storage device; and

if the desired data is not entirely in the cache of the local storage device, reading data

from the remote storage device to the local storage device and the local storage device

merging the data from the remote storage device with data from the cache of the local

storage device at the local storage;

prior to reading data from the remote storage device to the local storage device, creating a

temporary storage area at the local storage device if there is data from the local storage

device that is to be used;

prior to creating a temporary storage area, locking slots of the local storage device that

correspond to data from the local storage device that is to be used;

after merging the data, unlocking the slots of the local storage device that correspond to

data from the local storage device that is to be used.

5.   **Claim 2 (Canceled).**

6.   **Claim 3** A method, according to claim 2 1, wherein the temporary storage area is

a scratch slot.

7.   **Claims 4-5 (Canceled).**

8.   **Claim 10** Computer software, stored in a computer-readable medium, that reads

desired data while the data is being transferred from the local storage device to a remote

storage device, comprising:

executable code that returns the data from the cache if the desired data is entirely in a

cache of the local storage device, wherein the cache of the local storage device contains

data written to the local storage device begun after a first time and before a second time

that is associated with a first chunk of data and contains data written to the local storage

device begun after the second time that is associated with a second chunk of data

different from the first chunk of data and wherein after completion of all writes

associated with the first chunk of data, the local storage device initiates transfer of writes

associated with the first chunk of data to the remote storage device, an order of the

transfer from the local storage device to the remote storage device of data from the first

chunk being independent of an order in which data writes of the first chunk are provided

to the local storage device; and

executable code that reads data from the remote storage device to the local storage device

and merges the data from the remote storage device with data from the cache of the local

storage device at the local storage device if the desired data is not entirely in the cache of

the local storage device;

executable code that creates a temporary storage area at the local storage device if there is

data from the local storage device that is to be used prior to reading data from the remote

storage device to the local storage device;

executable code that locks slots of the local storage device that correspond to data from

the local storage device that is to be used prior to creating a temporary storage area;

executable code that unlocks the slots of the local storage device that correspond to data

from the local storage device that is to be used after merging the data.

9.   **Claim 11** (Canceled).

10.   **Claim 12** Computer software, according to claim ~~11~~ 10, wherein the temporary

storage area is a scratch slot.

11.   **Claims 13-14** (Canceled).

RELEVANT ART CITED BY THE EXAMINER

12.   The following prior art made of record and not relied upon is cited to establish the

level of skill in the applicant's art and those arts considered reasonably pertinent to

applicant's disclosure. See **MPEP 707.05(c)**.

13.   The following references teaches data backup copying with delayed directory

updating wherein data all update data is retentively stored without regard to update

sequence.

U.S. PATENT NUMBER

US 5,555,371

REASONS FOR ALLOWANCE

14.   The following is an examiner's statement of reasons for allowance:

15.   Per the instant office action, claims **1, 3, 6-10, 12 and 15-18** are considered as

allowable subject matter.

16.   Claims **1 and 10** (as amended above) are neither clearly anticipated nor rendered

obvious by the combination of cited prior art references, as discussed with Applicant's

representative on December 19, 2007.

17.   The reasons for allowance in the instant application of claims 1 and 10 (as

amended above) is the *combination with the inclusion* in these claims of the limitation of

a method/system for using a local storage device to read data from a remote storage

device while data is being transferred from the local storage device to a remote storage

device wherein "...prior to reading data from the remote storage device to the local

storage device, creating a temporary storage area at the local storage device if there is data from the local storage device that is to be used;

prior to creating a temporary storage area, locking slots of the local storage device that correspond to data from the local storage device that is to be used; after merging the data; after merging the data, unlocking the slots of the local storage device that correspond to data from the local storage device that is to be used." The prior art of record including the disclosure above neither anticipates nor renders obvious the above-recited combination.

18.   Dependent claims 3, 6-9, 12 and 15-18 are allowable at least for the reasons recited above as including all of the limitations of the allowable independent base claims upon which they depend.

19.   Furthermore, the term "computer-readable medium" as recited in claims 10, 12 and 15-18 is interpreted as comprising hardware, computer-readable storage media, such as data storage devices 37 and 38 (Figure 1).

20.   Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

DIRECTION OF FUTURE CORRESPONDENCES

21.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaima Campos whose telephone number is (571) 272-1232. The examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.

IMPORTANT NOTE

22.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Sanjiv Shah can be reached on (571) 272-4098. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

23.   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

December 19, 2007   Yaima Campos
                                                      Examiner
                                                      Art Unit 2185

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                                                      SANJIV SHAH
                                                      SUPERVISORY PATENT EXAMINER
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